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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,360	10/22/2003	Kalidas Shetty	4999-102 US	4951

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EXAMINER

CLARDY, S

ART UNIT PAPER NUMBER

1617

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,360

Applicant(s)

SHETTY, KALIDAS

Examiner

S. Mark Clardy

Art Unit

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date, _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

Art Unit: 1617

Claims 1-20 and new claims 21-23 are pending in this application.

Applicant's claims are drawn to compositions (product-by-process claims 14-17, 21-23), methods of using them (18-20) and methods of making them (1-13). The method of making the claims comprises fermenting fish (claim 5: capelin herring, menhaden) to obtain a soluble fish protein hydrolysate (SFPH) product, mixing it with homogenized seaweed, again fermenting, then taking the top layer as the useful plant growth enhancing layer. An organic acid (lactic, citric, acetic, malic, formic) may also be added to the composition (claims 2-3). The claims have been amended to require that: the SFPH is enriched in proline; the fish are harvested from the cold waters of the North Atlantic; and the seaweed is a cold tolerant seaweed species which is enriched in proline and has been homogenized with geothermal water enriched in sulfur. The new claims specify herbal extracts as part of the compositions.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23 are again rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Rutherford (US 4,383,845), Shetty (US 5,906,941), Hedgpeth, IV (US 5,876,479), Tatterson et al¹, and Kane (US 2004/0156920).

Rutherford teaches a foliar growth promoting mixture for application to plants comprising a liquid seaweed component in combination with a fish emulsion mixture, and a liquid humus mixture (col 2, lines 25-41). Sulfur is disclosed as one of the more common elements found

¹ Tatterson et al. "Fish Silage", *J. Sci. Fd. Agric.*, 25:369-379. 1974.

Art Unit: 1617

in seaweed (col 4, Table I), and is a known plant nutrient in the class of “secondary nutrients” (along with calcium). Thus the addition of sulfur, regardless of the source, is known in the art.

Shetty teaches that the soluble fish protein hydrolysate (SFPH) as used herein was known as a nutrient source for plant tissue culture. Proline is disclosed as a particularly useful amino acid additive (col 2, lines 1-5; col 7, lines 24-32). Herring and cod, which are known North Atlantic fish species, are disclosed as varieties of fish used in making the SFPH (col 8, Table 1).

Hedgpeth, IV, teaches a plant fertilizer composition or soil enhancer comprising a source of crude protein such as fish protein, humic acid, citric acid, and seaweed. The mixture is aged to break down proteins and allow for microbial growth (abstract).

Tatterson et al teach the process for making fish silage, which includes an acid addition step, i.e., the addition of formic acid (p. 370-371). Cod and haddock are fish varieties which may be used to make useable fish silage (p. 370, second paragraph).

Kane teaches that herbal extracts (e.g., onion, garlic, and neem; paragraphs 27, 50-51) and material from Labiatae (i.e., Lamiaceae; p. 14, Table 5B) are useful in agricultural compositions for promoting plant growth (p. 13). One of ordinary skill in the art would be motivated to use the plant source material of Kane with that of Rutherford or Hedgpeth IV in order to obtain the benefit of the herbal materials disclosed in Kane.

One of ordinary skill in the art would be motivated to combine these references in order to make use of fish byproducts in making plant fertilizer compositions.

Thus it would have been *prima facie* obvious to the ordinary artisan at the time the invention was made to have combined applicant’s fish, seaweed, and acid components in a fermentation process in order to obtain a fertilizer product because the prior art teaches that these components were known to have utility as fertilizer materials after fermentation.

Art Unit: 1617

Applicant stated in the specification that:

Fish and seaweed for use in preparing organic compositions (fermented product) of the present invention are preferably harvested from cold waters of the North Atlantic, e.g., off the coast of Iceland. However, compositions of the present invention may be prepared using a myriad of ingredients similar to those described herein, e.g., fish, seaweed, and water from around the world (para 13).

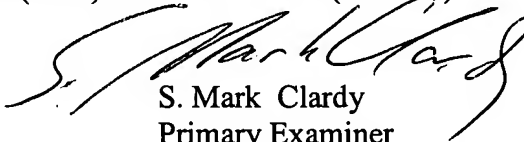
Thus there does not appear to be any criticality in selecting the North Atlantic fish or cold water seaweed species now specified in the independent claims. Absent evidence demonstrating an unexpected result for using North Atlantic fish species such as herring or cod exclusively, or cold water seaweed, or sulfur from a geothermal source, etc., applicant is seen as having done nothing more than what would have been *prima facie* obvious from the prior art.

No unobvious or unexpected results are noted; no claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 571-272-0611. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


S. Mark Clardy
Primary Examiner
Art Unit 1617

March 28, 2006